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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/826,198

Applicant(s)

BESSEL, DAVID H.

Examiner

CHRIS PARRY

Art Unit

2421

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,7-11 and 28-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,7-11 and 28-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 6-7, filed 20 August 2009, with respect to the rejection(s) of claim(s) 1 and 28 under 35 USC 112, first paragraph have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of 35 USC 112, second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been made.

Applicant points out that the term "demultiplexer" is widely known and is not synonymous with the term "switch", however the specification has attempted to give a special definition to the term demultiplexer. The specification has described demultiplexer 103 as a device that is capable of selectively outputting a compressed signal to a hard disk drive or an MPEG2 decoder, with the function being synonymous with a switch.

As stated by the applicant (see page 6 of applicant's remarks), a demultiplexer is defined as "an electronic device that separates a multiplex signal into its component parts" (<http://www.merriam-webster.com/dictionary/demultiplexer>), a definition the examiner agrees with and will reference throughout. However, the specification describes how a received compressed signal is treated by demultiplexer 103 as follows:

The compressed signal is then routed through a demultiplexer (103). From the demultiplexer (103), the compressed signal, which was originally received as an

*analog signal, can be recorded on a hard disk drive (107) or other digital data storage medium. **Alternatively**, the signal can be decompressed with an MPEG2 decoder (104) and output to a television set (106) for display. (Page 8, ¶ 44)*

It is clear from the specification that the claimed demultiplexer is not separating a multiplexed signal into its component parts nor is the demultiplexer outputting a demultiplexed signal to either a decoder or a digital data storage device. Demultiplexer 103 is selectively routing a received compressed signal to a hard disk or MPEG2 decoder depending on the user's request. Further, a demultiplexer would not be used by one skilled in the art to selectively control output of a signal as claimed. The mere fact that claims 1 and 28 require the demultiplexer to selectively output a signal to either a decoder or a storage device provides further evidence that the claimed demultiplexer operates as a switch. A switch is defined as a device for making, breaking, or changing the connections in an electrical circuit (<http://www.merriam-webster.com/dictionary/switch>). The described and claimed demultiplexer reads on the definition of a switch as the claimed and described demultiplexer is able to change the connections in an electrical circuit by selectively outputting a signal.

2. Applicant's arguments filed 20 August 2009 have been fully considered but they are not persuasive.

In response to applicant's argument (Pages 8-11) stating Barton fails to disclose a demultiplexer for the reasons of the relied upon teachings of a demultiplexer in Barton is actually a switch, the examiner respectfully disagrees.

As the point has been made above, the claimed demultiplexer has been defined in the specification as a device that receives a compressed stream from an analog signal path and routes the compressed signal to either a hard disk drive or an MPEG decoder. Although a demultiplexer is known in the art as a device for separating a multiplexed signal into its component parts, there is no evidence or reasons to suggest this is the case with the claimed demultiplexer. The specification clearly states a received compressed signal at the demultiplexer 103, can be output to either a hard disk drive 107 for recording or to an MPEG decoder 104 for display on TV 106.

Because AAPA fails to disclose the connection between the encoder in the analog signal path and the demultiplexer in the digital signal path, Barton is cited as disclosing the claimed feature.

Barton discloses input section 101 receives inputs in a multitude of forms including NTSC (analog) and ATSC (digital), where input section 101 tunes the channel of the specific program and an encoder (703 – figure 7) compresses said digital signal (figures 1 and 7; Col. 3, lines 30-61 and Col. 6, lines 26-35). Barton further discloses a media switch 102/701 or "demultiplexer" that outputs the received compressed stream from MPEG encoder 703, to the MPEG decoder 715 and to storage device 710 (Col. 3, line 30 to Col. 4, line 2; Col. 4, lines 23-44; and Col. 6, lines 26-65).

Barton additionally teaches a connection (i.e., the connection between MPEG encoder 703 and media switch 701) for routing said compressed digital signal from said encoder [703] of said analog signal path to said demultiplexer [102/701] (i.e., encoder 703 provides the analog signal that was encoded into MPEG format to media switch

701) (Col. 3, lines 49-65 and Col. 6, lines 26-35); and wherein said demultiplexer [102/701] outputs a signal to either a decoder (715 – figure 7) with output to a display device (TV 716 – figure 7) or a digital data storage device (105/710 – figs. 1 & 7) (Col. 3, line 62 to Col. 4, line 14 and Col. 6, line 26 to Col. 7, line 4).

Therefore, even though the media switch of Barton is not called a demultiplexer nor does it separate a signal into multiple signals, the media switch of Barton reads on and performs the same functions as the claimed demultiplexer as defined by applicant's specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "demultiplexer" in claims 1 and 28 is used by the claim to mean "a switch", while the accepted meaning is "an electronic device that separates a

multiplexed signal into its component parts.” The term is indefinite because the specification does not clearly redefine the term.

Claims 1 and 28 recite a digital signal path comprising a digital tuner and a demultiplexer and said demultiplexer selectively outputs a demultiplexed signal, however the term demultiplexer has been used in the claim that is inconsistent with the accepted definition.

Merriam-Webster defines a demultiplexer as “an electronic device that separates a multiplex signal into its component parts” (<http://www.merriam-webster.com/dictionary/demultiplexer>). Merriam-Webster further defines the term switch as “a device for making, breaking, or changing the connections in an electrical circuit” (<http://www.merriam-webster.com/dictionary/switch>).

The specification describes how a received compressed signal is treated by demultiplexer 103 as follows:

*The compressed signal is then routed through a demultiplexer (103). From the demultiplexer (103), the compressed signal, which was originally received as an analog signal, can be recorded on a hard disk drive (107) or other digital data storage medium. **Alternatively**, the signal can be decompressed with an MPEG2 decoder (104) and output to a television set (106) for display. (Page 8, ¶ 44)*

It is unclear from a reading of the specification and the claims as to whether the claimed demultiplexer is used to mean “a switch” or “a demultiplexer”.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 5, 7-11, and 28-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art "AAPA" (figure 1; pages 1-5) in view of Barton et al. "Barton" (USPN 6,233,389).

Regarding Claim 1, AAPA discloses a television signal processing and recording system (figure 1) for handling both digital and analog video signals (pages 3-4; ¶ 16), said system comprising:

an analog signal path (i.e., signal output from tuner 101) comprising an analog tuner (101 – figure 1), a video decoder (109 – figure 1) for converting an analog signal to a digital signal (page 4, ¶ 18), and an encoder (105 – figure 1) for compressing said digital signal output by said video decoder [109] (page 4, ¶ 18);

a digital signal path (i.e., signal output from tuner 102) comprising a digital tuner (102 – figure 1) and a demultiplexer (103 - figure 1) (page 4, ¶ 19); and

wherein said demultiplexer outputs a demultiplexed signal to either a decoder (104 – figure 1) with output to a display device (106 – figure 1) or a digital data storage device (107 – figure 1) (page 4, ¶ 19).

AAPA further discloses after analog signal is decoded by decoder 109, the signal can be sent to television 106 for display or the signal can be forwarded to be

compressed by MPEG2 encoder 105, where the signal is output to and recorded on a hard disk drive 107 (see page 4, ¶ 18). AAPA fails to specifically disclose a connection for routing said compressed digital signal from said encoder of said analog signal path to said demultiplexer.

In an analogous art, Barton discloses a television signal processing and recording system (figures 1 and 7) for handling both digital (i.e., ATSC) and analog video signals (i.e., NTSC), said system comprising:

an analog signal path (i.e., input section 101 receives inputs in a multitude of forms including NTSC) comprising an analog tuner (i.e., input section 101 tunes the channel of the specific program), a video decoder for converting an analog signal to a digital signal (i.e., input section 101 must first convert the received analog signal into a digital signal before the analog signal can be encoded into MPEG format), and an encoder (703 – figure 7) for compressing said digital signal (figures 1 and 7; Col. 3, lines 30-61 and Col. 6, lines 26-35);

a digital signal path (i.e., input section 101 receives inputs in a multitude of forms including digital forms such as ATSC) comprising a digital tuner (i.e., input section 101 tunes the channel of the specific program) and a demultiplexer (media switch 102/701 – figs. 1 & 7) (i.e., media switch 102 outputs the received stream from input section 101 to the output section 103 and simultaneously to storage device 105) (Col. 3, line 30 to Col. 4, line 2; Col. 4, lines 23-44; and Col. 6, lines 26-65); and

a connection (i.e., the connection between input section 101 and media switch 102) for routing said compressed digital signal from said encoder [703] of said analog

signal path to said demultiplexer [102/701] (i.e., encoder 703 provides the analog signal that was encoded into MPEG format to media switch 701) (Col. 3, lines 49-65 and Col. 6, lines 26-35);

wherein said demultiplexer [102/701] outputs a demultiplexed signal to either a decoder (715 – figure 7) with output to a display device (TV 716 – figure 7) or a digital data storage device (105/710 – figs. 1 & 7) (Col. 3, line 62 to Col. 4, line 14 and Col. 6, line 26 to Col. 7, line 4).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA to include a connection for routing said compressed digital signal from said encoder of said analog signal path to said demultiplexer as taught by Barton to facilitate combining prior art elements according to known methods to yield predictable results of efficiently routing signals through a system that provides output to a television set and a recording device.

As for Claim 5, AAPA and Barton disclose, in particular AAPA teaches wherein said digital data storage device (107 – figure 1) is a hard disk drive (pages 3-4, ¶ 16-19).

As for Claim 7, AAPA and Barton disclose, in particular AAPA teaches wherein said encoder [105] is an MPEG2 encoder (page 4, ¶ 18, see also figure 1).

As for Claim 8, AAPA and Barton disclose, in particular AAPA teaches wherein said decoder [104] is an MPEG2 decoder (page 4, ¶ 19, see also figure 1).

As for Claim 9, AAPA and Barton disclose, in particular Barton teaches wherein said video decoder [101], encoder [703], connection and decoder [715] are incorporated in a set-top box (see figs. 1 and 7; Col. 3, line 30 to Col. 4, line 8).

As for Claim 10, AAPA and Barton disclose, in particular Barton teaches wherein said digital data storage device [105/710] is incorporated in a personal video recorder (Col. 3, line 30 to Col. 4, line 8).

As for Claim 11, AAPA and Barton disclose, in particular Barton teaches wherein said video decoder [101], encoder [703], connection, decoder [715] and digital data storage device [105/710] are incorporated in a single set-top unit (see figs. 1 and 7; Col. 3, line 30 to Col. 4, line 8).

Regarding Claim 28, AAPA discloses a method for handling both digital and analog video signals (pages 3-4; ¶ 16), said method comprising:

processing analog signals, when input, in an analog signal path (i.e., signal output from tuner 101) comprising an analog tuner (101 – figure 1), a video decoder (109 – figure 1) for converting an analog signal to a digital signal (page 4, ¶ 18), and an

encoder (105 – figure 1) for compressing said digital signal output by said video decoder [109] (page 4, ¶ 18);

processing digital signals, when input, in a digital signal path (i.e., signal output from tuner 102) comprising a digital tuner (102 – figure 1) and a demultiplexer (103 – figure 1) (page 4, ¶ 19); and

with said demultiplexer, selectively outputting a signal to either a decoder (104 – figure 1) with output to a display device (106 – figure 1) or a digital data storage device (107 – figure 1) (page 4, ¶ 19).

AAPA further discloses after analog signal is decoded by decoder 109, the signal can be sent to television 106 for display or the signal can be forwarded to be compressed by MPEG2 encoder 105, where the signal is output to and recorded on a hard disk drive 107 (see page 4, ¶ 18). AAPA fails to specifically disclose routing said compressed digital signal from said encoder of said analog signal path to said demultiplexer.

In an analogous art, Barton discloses a method for handling both digital and analog video signals, said method comprising:

processing analog signals, when input, in an analog signal path (i.e., input section 101 receives inputs in a multitude of forms including NTSC) comprising an analog tuner (i.e., input section 101 tunes the channel of the specific program), a video decoder for converting an analog signal to a digital signal (i.e., input section 101 must first convert the received analog signal into a digital signal before the analog signal can

be encoded into MPEG format), and an encoder (703 – figure 7) for compressing said digital signal (figures 1 and 7; Col. 3, lines 30-61 and Col. 6, lines 26-35);

processing digital signals, when input, in a digital signal path (i.e., input section 101 receives inputs in a multitude of forms including digital forms such as ATSC) comprising a digital tuner (i.e., input section 101 tunes the channel of the specific program) and a demultiplexer (media switch 102/701 – figs. 1 & 7) (i.e., media switch 102 outputs the received stream from input section 101 to the output section 103 and simultaneously to storage device 105) (Col. 3, line 30 to Col. 4, line 2; Col. 4, lines 23-44; and Col. 6, lines 26-65); and

routing said compressed digital signal from said encoder [703] of said analog signal path to said demultiplexer [102/701] (i.e., encoder 703 provides the analog signal that was encoded into MPEG format to media switch 701) (Col. 3, lines 49-65 and Col. 6, lines 26-35);

with said demultiplexer [102/701], selectively outputting a signal to either a decoder (715 – figure 7) with output to a display device (TV 716 – figure 7) or a digital data storage device (105/710 – figs. 1 & 7) (Col. 3, line 62 to Col. 4, line 14 and Col. 6, line 26 to Col. 7, line 4).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA to include routing said compressed digital signal from said encoder of said analog signal path to said demultiplexer as taught by Barton to facilitate combining prior art elements according to known methods to yield

predictable results of efficiently routing signals through a system that provides output to a television set and a recording device.

As for Claim 29, AAPA and Barton disclose, in particular AAPA teaches wherein said digital data storage device (107 – figure 1) is a hard disk drive (pages 3-4, ¶ 16-19).

As for Claim 30, AAPA and Barton disclose, in particular AAPA teaches wherein said encoder [105] is an MPEG2 encoder (page 4, ¶ 18, see also figure 1).

As for Claim 31, AAPA and Barton disclose, in particular AAPA teaches wherein said decoder [104] is an MPEG2 decoder (page 4, ¶ 19, see also figure 1).

As for Claim 32, AAPA and Barton disclose, in particular Barton teaches wherein said video decoder [101], encoder [703], connection and decoder [715] are incorporated in a set-top box (see figs. 1 and 7; Col. 3, line 30 to Col. 4, line 8).

As for Claim 33, AAPA and Barton disclose, in particular Barton teaches wherein said digital data storage device [105/710] is incorporated in a personal video recorder (Col. 3, line 30 to Col. 4, line 8).

As for Claim 34, AAPA and Barton disclose, in particular Barton teaches wherein said video decoder [101], encoder [703], connection, decoder [715] and digital data storage device [105/710] are incorporated in a single set-top unit (see figs. 1 and 7; Col. 3, line 30 to Col. 4, line 8).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRIS PARRY whose telephone number is (571) 272-8328. The examiner can normally be reached on Monday through Friday, 8:00 AM EST to 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN MILLER can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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